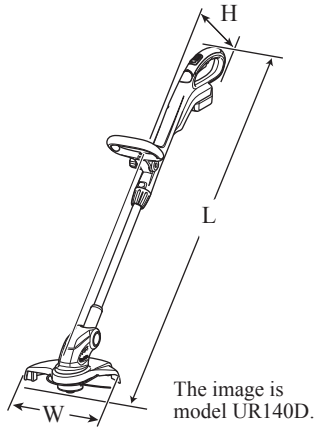
TECHNICAL INFORMATION

Model No. ► BUR141/ BUR181/ UR140D/ UR180D
(LXRU01/ LXRU02/ RU01/ RU02)*1

Description ► 260mm (10-1/4") Cordless String Trimmer

*1 Model number for North and Central American countries



The image is model UR140D.

Dimensions: mm (")		
Length (L)	minimum	1,229 (48-1/2)
	maximum	1,433 (56-1/2)
Width (W)		267 (10-1/2)
Height (H)*1	minimum	186 (7-3/8)
	maximum	257 (10-1/8)

*1 The height varies depending on the angle of the cutting head.

CONCEPT AND MAIN APPLICATIONS

Models BUR141/ BUR181/ UR140D/ UR180D have been developed as lightweight 260mm (10-1/4") Cordless string trimmers for home gardening powered by the following Li-ion batteries:
BUR141 by BL1415/BL1430 (14.4V-1.3/3.0Ah)
BUR181 by BL1815/BL1830 (18V-1.3/3.0Ah)
UR140D by BL1411G (14.4V-1.1Ah)
UR180D by BL1811G (18V-1.1Ah)

And they feature well balanced tool design with angle adjustable cutting head.

These products are available in the variations listed in the next page.

► Specification

Specification \ Model		BUR141 (LXRU01*1)	BUR181 (LXRU02*1)	UR140D (RU01*1)	UR180D (RU02*1)
Battery	Cell	Li-ion			
	Voltage: V	14.4	18	14.4	18
	Capacity: Ah	1.3/ 3.0		1.1	
	Energy capacity: Wh	19/ 44	24/ 54	16	20
	Charging time: min.	15/ 22 with DC18RC		60 with DC18WA	
Max. output: W		160	230	160	230
Cutting width: mm (")		260 (10-1/4)			
No load speed: min^{-1}=rpm		6,000	7,800	6,000	7,800
Nylon cutting head	Cord feeding system	Bump & Feed			
	Cutting system	Single cord			
	Nylon cord [diameter x length]	1.65mm x 8m (1/16" x 26ft)			
Length adjust range of pipe shaft: mm (")		190 (7-1/2)			
Edger function		Yes			
Weight according to EPTA-Procedure 01/2003*2: kg (lbs)		2.9 (6.3)/ 3.0 (6.7)	2.9 (6.4)/ 3.1 (6.9)	2.9 (6.3)	2.9 (6.4)

*1 Model number for North and Central American countries
*2 with Battery, Nylon cutting head, Shoulder strap, Guard, Loop handle

► Standard equipment

Nylon cutting head 1
Shoulder belt 1
Safety goggles 1
15m Nylon cord 1

Note: The standard equipment for the tool shown above may vary by country.

► Optional accessories

Shoulder belt
Safety goggles
15m Nylon cord
30m Nylon cord
Spool set

Battery BL1415 (for BUR141)
Battery BL1430 (for BUR141)
Battery BL1815 (for BUR181)
Battery BL1830 (for BUR181)
Battery BL1411G (for UR140D)
Battery BL1811G (for UR180D)

Fast charger DC18RC (for BUR141, BUR181)
Charger DC18SD (for BUR141, BUR181)
Charger DC24SC (for BUR141, BUR181)
Automotive charger DC18SE (for BUR141, BUR181)
Charger DC18WA (for UR140D, UR180D)

Variation list

BUR141 (LXRU01*1)/ BUR181 (LXRU02*1)

Model No.	Compatible Battery	Charger	Battery		Battery cover	Housing color
			Type	Q'ty		
BUR141Z	BL1415/ BL1430	---	---	---	---	black & Makita blue
BUR141RH		DC18RC	BL1415	1	---	
BUR141SH		DC18SD				
BUR141RF		DC18RC	BL1430			
BUR141SHE		DC18SD	BL1415	2	1	
BUR141RFE		DC18RC	BL1430			
LXRU01C		DC18RA or DC18SD	BL1415			
LXRU01		DC18RA	BL1430			
BUR181Z	BL1815/ BL1830	---	---	---	---	
BUR181RH		DC18RC	BL1815	1	---	
BUR181SH		DC18SD				
BUR181SF			BL1830			
BUR181RF		DC18RC				
BUR181RFE				2	1	
LXRU02Z		---	---	---	---	
LXRU021C		DC18SD	BL1815	1	---	
LXRU02C				2	1	
LXRU02		DC18RA	BL1830			

UR140 (RU01*1)/ UR180 (RU02*1)

Model No.	Compatible Battery	Charger	Battery		Battery cover	Housing color
			Type	Q'ty		
UR140DZ	BL1411G	---	---	---	---	white & Makita blue
UR140DW		DC18WA	BL1411G	1	---	
RU01				2	1	
UR180DZ	BL1811G	---	---	---	---	
UR180DW		DC18WA	BL1811G	1	---	
RU02Z		---	---	---	---	
RU021		DC18WA	BL1811G	1	---	
RU02				2	1	

Note: All models also include the accessories listed in "Standard equipment" of page 1.
***1** Model numbers for North and Central American countries

Repair

CAUTION: Repair the machine in accordance with "Instruction manual" or "Safety instructions".

[1] NECESSARY REPAIRING TOOLS

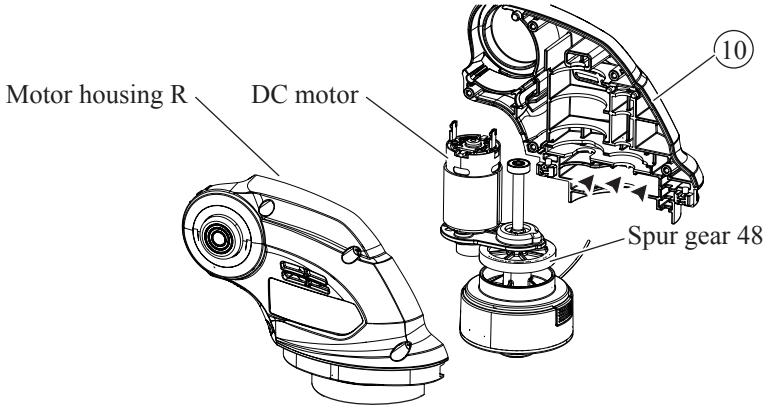
Code No.	Description	Use for
1R022	Bearing plate	Supporting Spool holder to remove Spur gear 48
1R217	Ring 22	Supporting Spur gear 48 to remove Gear shaft
1R236	Round Bar for Arbor 7-100	Removing Spool holder
1R286	Round Bar for Arbor 12-50	Supporting Spool holder to press-fit Gear shaft

[2] LUBRICATION

Apply **Makita grease N. No.2** to the following portions designated with the black triangle to protect parts and product from unusual abrasion.

Item No.	Description	Portion to lubricate	Amount
(10)	Motor housing L	Gear room where Spur gear 48 rotates	3 g

Fig. 1



[3] DISASSEMBLY/ASSEMBLY

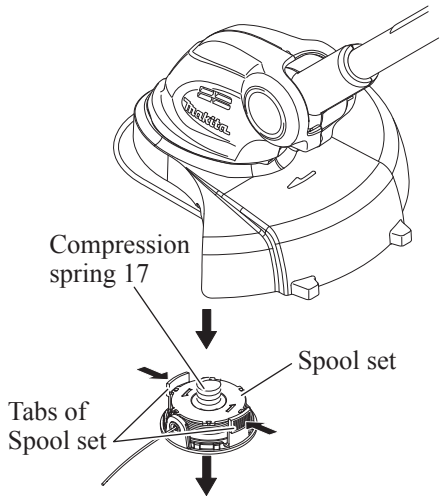
[3] -1. Gear shaft complete

DISASSEMBLING

(1) Remove Spool set and Safety cover as drawn in **Fig. 2**.

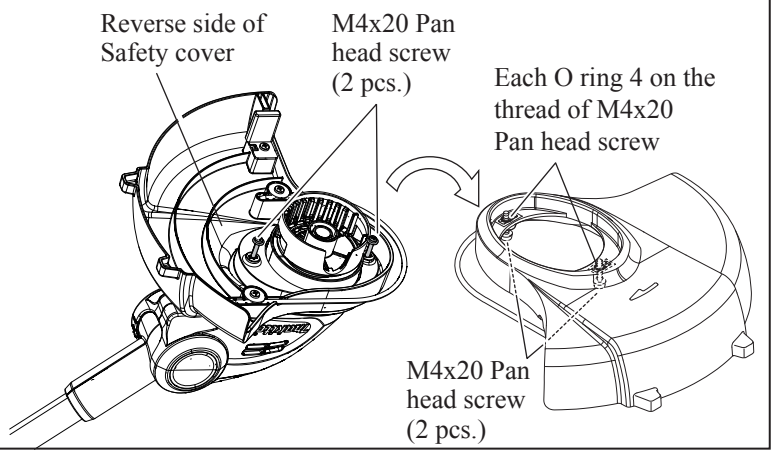
Fig. 2

1. While pressing the tabs, pull off Spool set. Compression spring 17 is removed together with Spool set.



2. Loosen two M4x20 Pan head screws, and remove Safety cover from Motor housing set.

Note: Each M4x20 Pan head screw has O ring 4 on the thread to prevent losing. It is not necessary to separate M4x20 Pan head screws from Safety cover/ O rings 4.



Repair

[3] DISASSEMBLY/ASSEMBLY

[3] -1. Gear shaft complete (cont.)

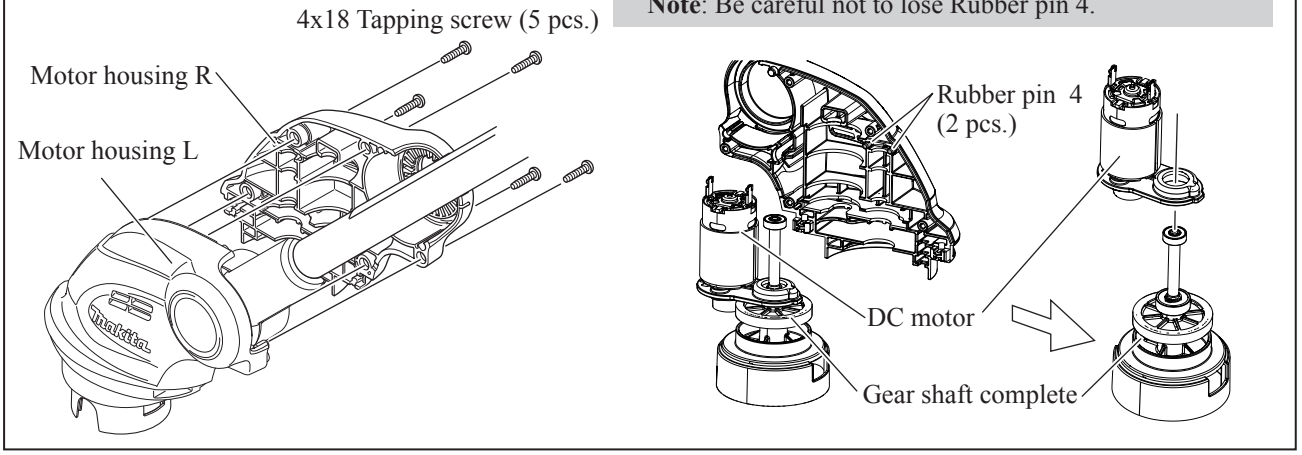
DISASSEMBLING

(2) After removing Motor housing R, Remove DC motor and Gear shaft complete as drawn in **Fig. 3**.

Fig. 3

3. Remove five 4x18 Tapping screws and Motor housing R from Motor housing L.

4. Remove Gear shaft complete together with DC motor. And separate DC motor section from Gear shaft complete. **Note**: Be careful not to lose Rubber pin 4.

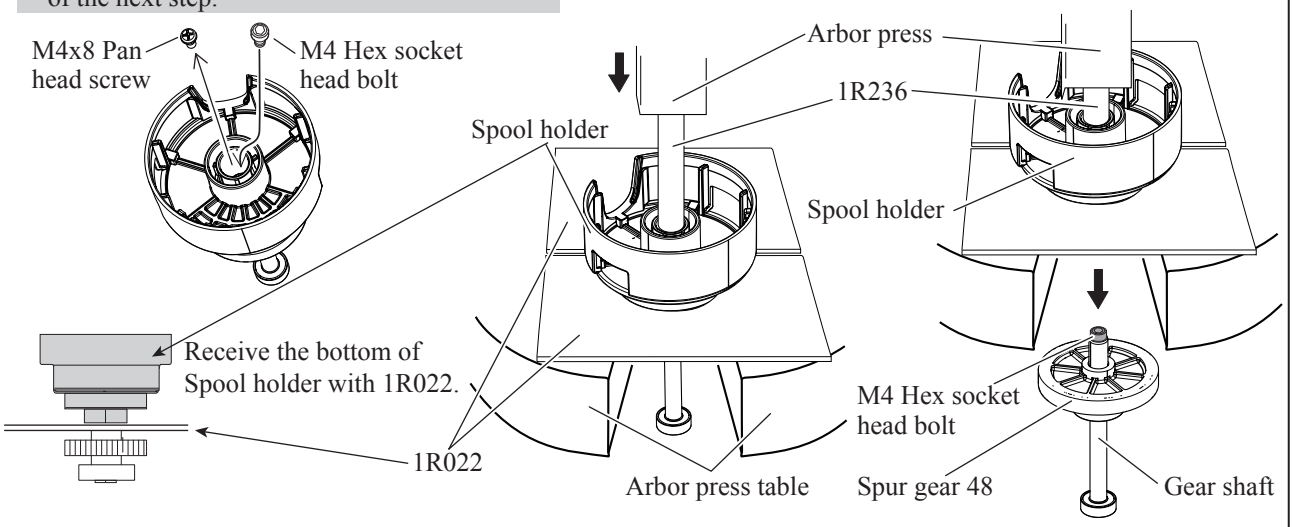


(3) Disassemble Gear shaft complete as drawn in **Fig. 4**.

Fig. 4

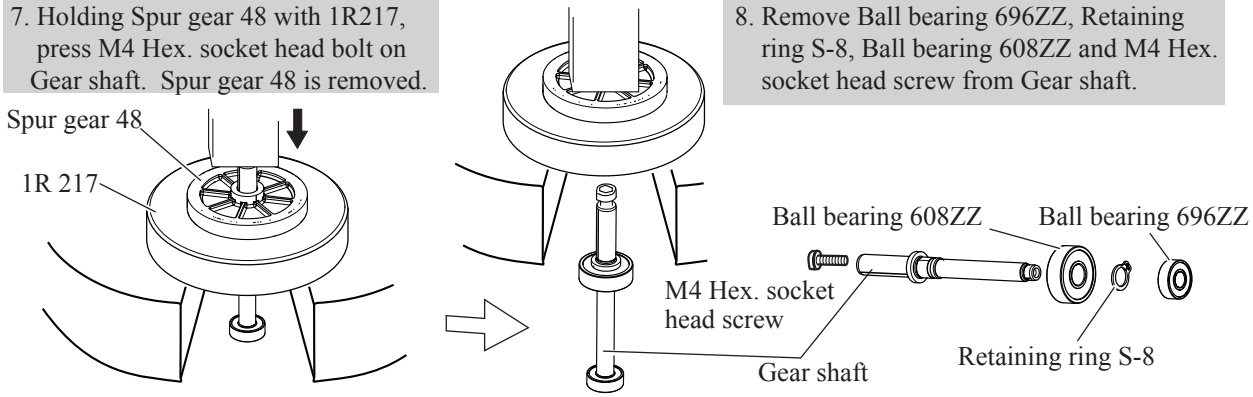
5. Remove M4x8 Pan head screw. And then, install M4 Hex socket head bolt in preparation of the next step.

6. Receive Spool holder with 1R022 and press M4 Hex socket head bolt with 1R236. Spool holder is removed.



7. Holding Spur gear 48 with 1R217, press M4 Hex. socket head bolt on Gear shaft. Spur gear 48 is removed.

8. Remove Ball bearing 696ZZ, Retaining ring S-8, Ball bearing 608ZZ and M4 Hex. socket head screw from Gear shaft.



Repair

[3] DISASSEMBLY/ASSEMBLY

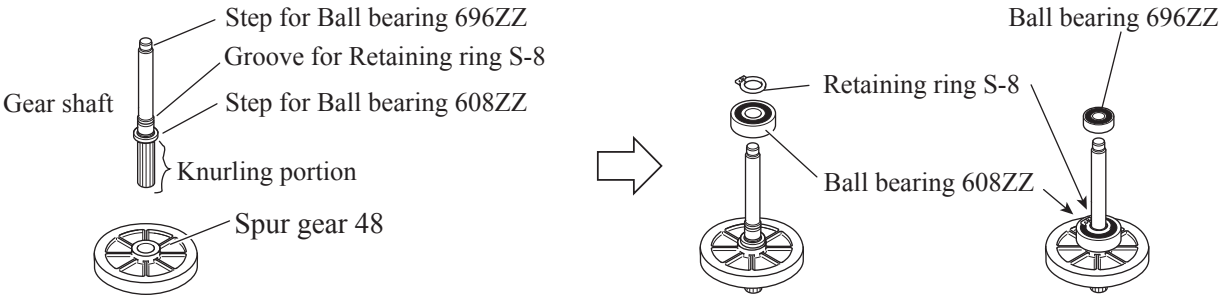
[3] -1. Gear shaft complete (cont.)

ASSEMBLING

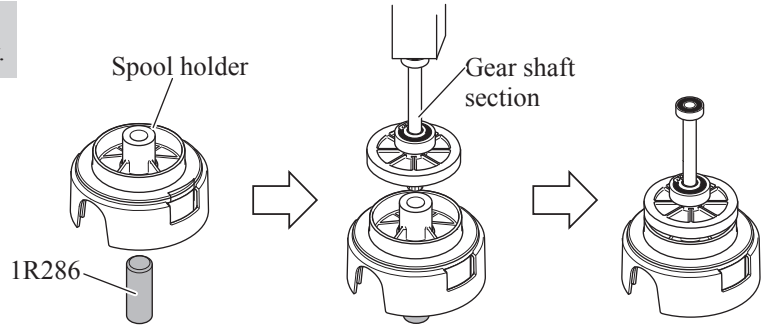
(1) Assemble Gear shaft complete as drawn in **Fig. 5**.

Fig. 5

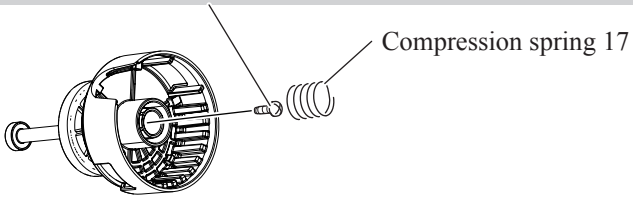
1. Press Gear shaft to Spur gear 48 as drawn below.
   Press Ball bearing 608ZZ to Gear shaft and secure Ball bearing 608ZZ with Retaining ring S-8.
   Press Ball bearing 696ZZ to Gear shaft.
   Note: Be careful to the direction of Gear shaft.



2. Supporting Spool holder with 1R286, press Gear shaft section to Spool holder.



3. Apply adhesive (ThreeBond 1342 or Locktite 242) to the thread of M4x8 Pan head screw when reusing it.
   Replace M4 Hex socket head bolt to M4x8 Pan head screw with adhesive.
   Note: Makita genuine M4x8 Pan head screw is thread locker screw.



(2) Assemble Gear shaft complete to Motor housing in the reverse order of Disassembly. (refer to **Fig. 3**)

Note: Make sure that 2 pcs. of Rubber pin 4 are mounted to Motor housing (L).

[3] -2. DC motor

DISASSEMBLING

DC motor can be removed as drawn in **Fig. 3**.
No need to disassemble Spool set.

Note: Be careful not to lose Rubber pin 4.

ASSEMBLING

Assemble DC motor to Motor housing in the reverse order of disassembly. (Refer to **Fig. 3**)

Note: Make sure that 2 pcs. of Rubber pin 4 are mounted to Motor housing (L).

Repair

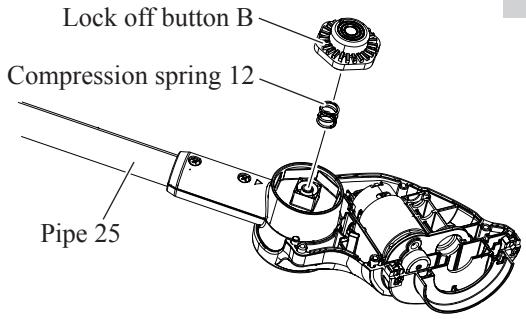
[3] DISASSEMBLY/ASSEMBLY
[3] -3. Pipe section

DISASSEMBLING

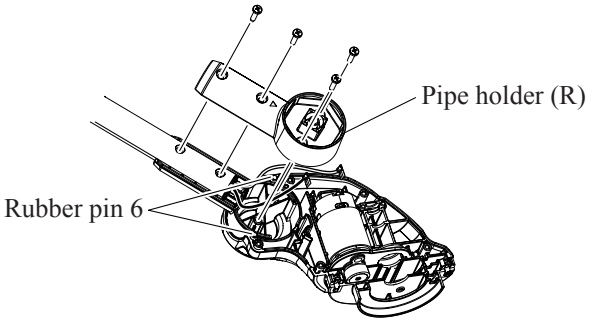
(1) Remove Spool set and Safety cover as drawn in **Fig. 2**.
(2) Separate Motor housing (R) from Motor housing (L) as drawn in **Fig. 3**.
(3) Disassemble Pipe 25 complete as drawn in **Fig. 6**.

Fig. 6

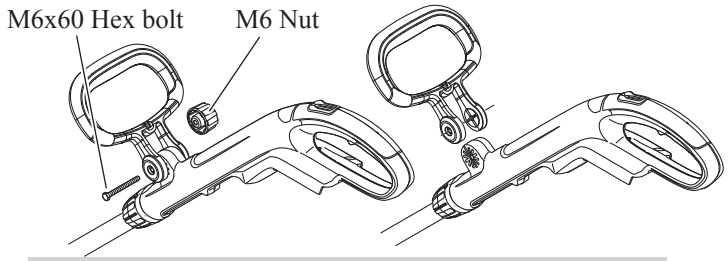
1. Remove Lock off button B and Compression spring 12.



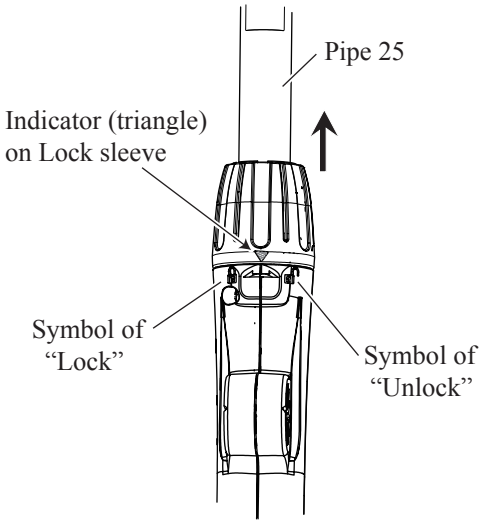
2. Remove Pipe holder (R) by unscrewing four 4x18 Tapping screws and disconnect Lead wires (black, white) from DC motor.
Note: Be careful not to lose Rubber pin 6.



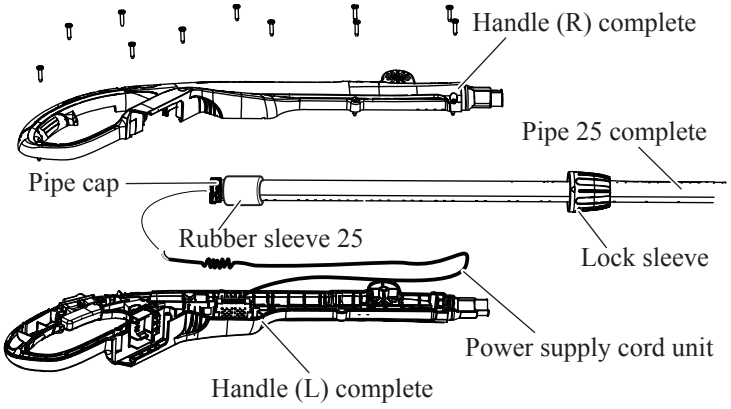
3. Remove M6 Nut and M6x60 Hex bolt. And remove Front grip.



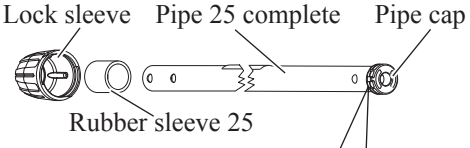
4. While aligning the indicator (triangle) on Lock sleeve to the just center of "Unlock" and "Lock", pull off it toward Pipe 25 side.



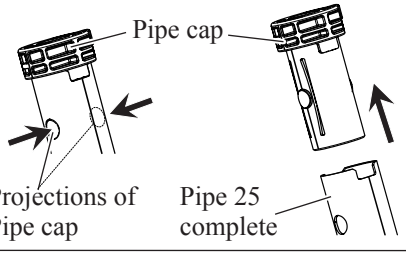
5. Remove Handle (R) from Handle (L) by unscrewing eleven 4x18 Tapping screws.
Pull out Power supply cord unit from Pipe 25 complete.



6. Remove Lock sleeve and Rubber sleeve 25.



7. While pressing the projections on the both sides of Pipe 25 complete, pull off Pipe cap from Pipe 25 complete.



Repair

[3] DISASSEMBLY/ASSEMBLY

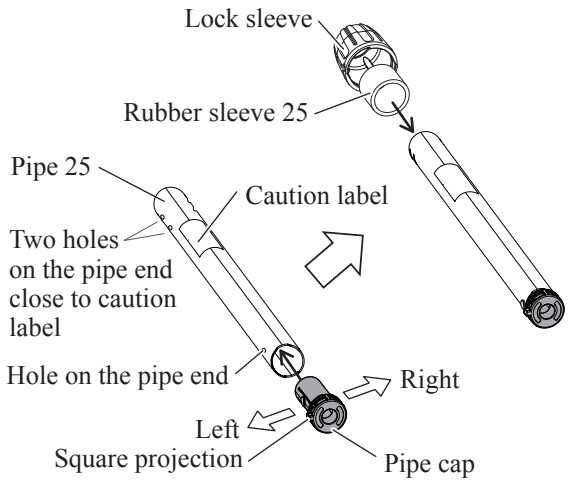
[3] -3. Pipe section (cont.)

ASSEMBLING

Assemble Pipe section as drawn in **Figs. 7 and 8**.

Fig. 7

1. Insert Pipe cap into Pipe 25 so that the square projection of Pipe cap fits in the left side of Pipe as drawn below.
   Next, mount Rubber pipe 25 and Lock sleeve 25 onto Pipe 25.



2. Pass Power supply cord unit through Pipe 25.
   Fit the square projection of Pipe cap into the inner groove of Handle (L).
   Set Rubber sleeve 25 in place of Handle (L).
   Assemble Handle (R) to Handle (L).

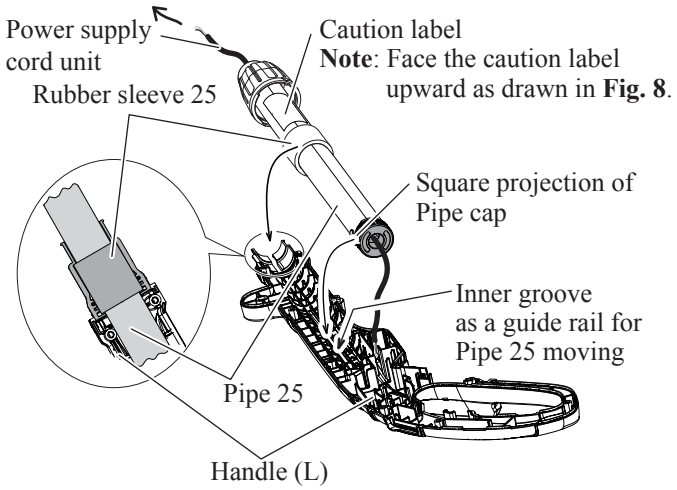
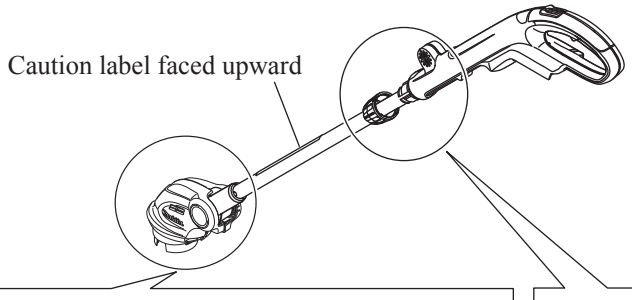
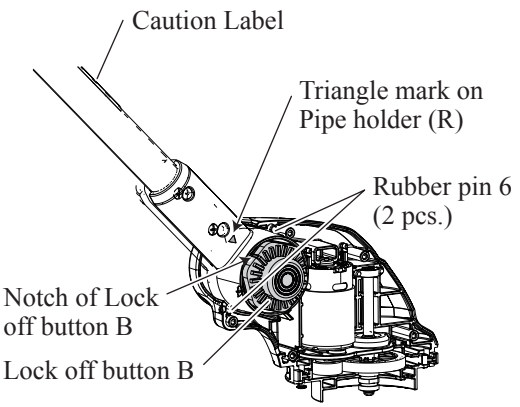


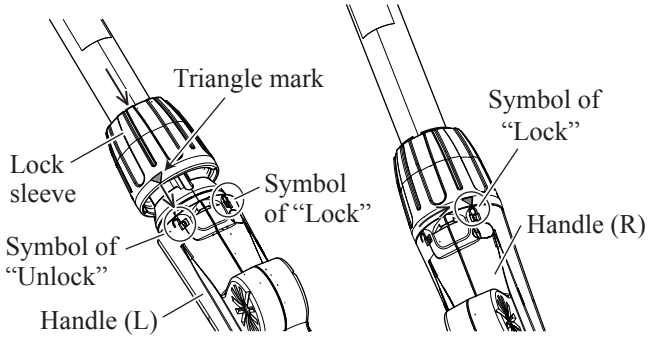
Fig. 8



3. Mount Lock off button B to Pipe holder (R) so that the notch aligns to the triangle mark as drawn below.
   Note: Make sure that 2 pcs. of Rubber pin 6 are set in place.



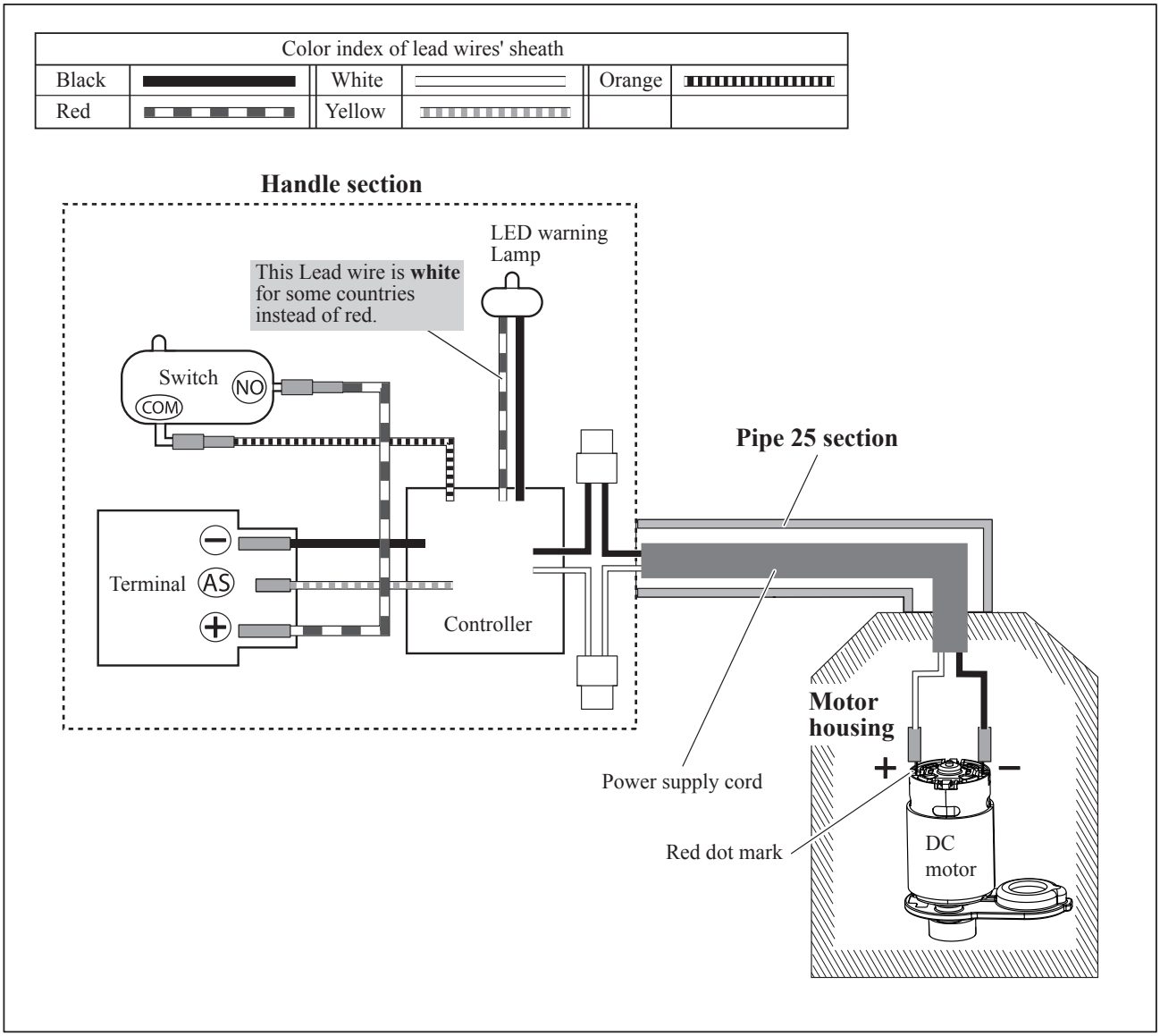
4. While aligning the triangle mark of Lock sleeve to the symbol of "Unlock" on Handle (L), push Lock sleeve toward Handle complete until it clicks.
   And turn Lock sleeve until its triangle mark aligns to the symbol of "Lock" on Handle (R).



Circuit diagram

UR140D, UR180D, BUR141, BUR181

Fig. D-1



Wiring diagram

UR140D, UR180D, BUR141, BUR181

Fig. D-2

Wiring to DC motor

While facing the wire connecting portions to Motor housing (L) side, connect Lead wire (red) receptacle to the terminal with **Red dot mark** and Lead wire (black) receptacle to the other terminal.

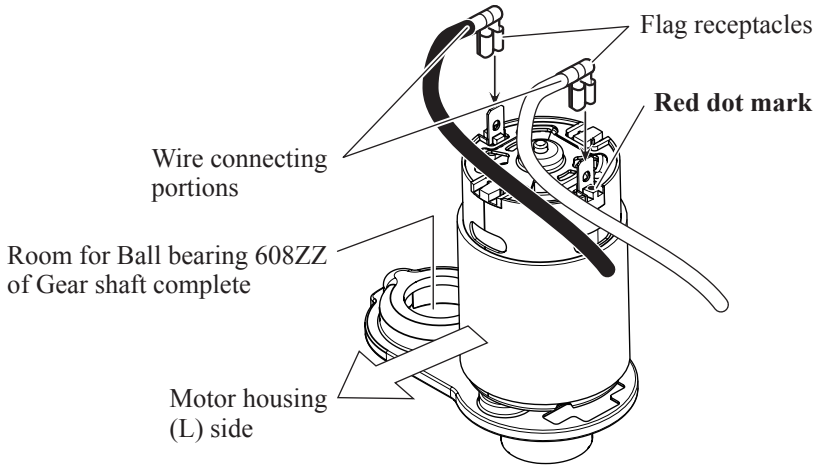
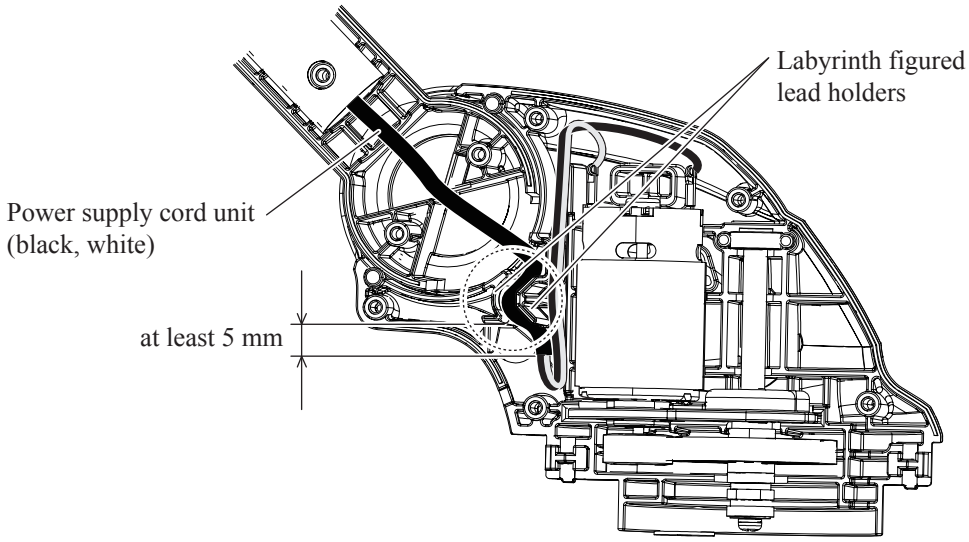


Fig. D-3

Wiring in Motor housing L

1. Come out at least 5 mm long portion of Power supply cord unit from the lower edge of Labyrinth figured lead holders.
2. Make sure that Power supply cord unit is fixed in Labyrinth figured lead holders.



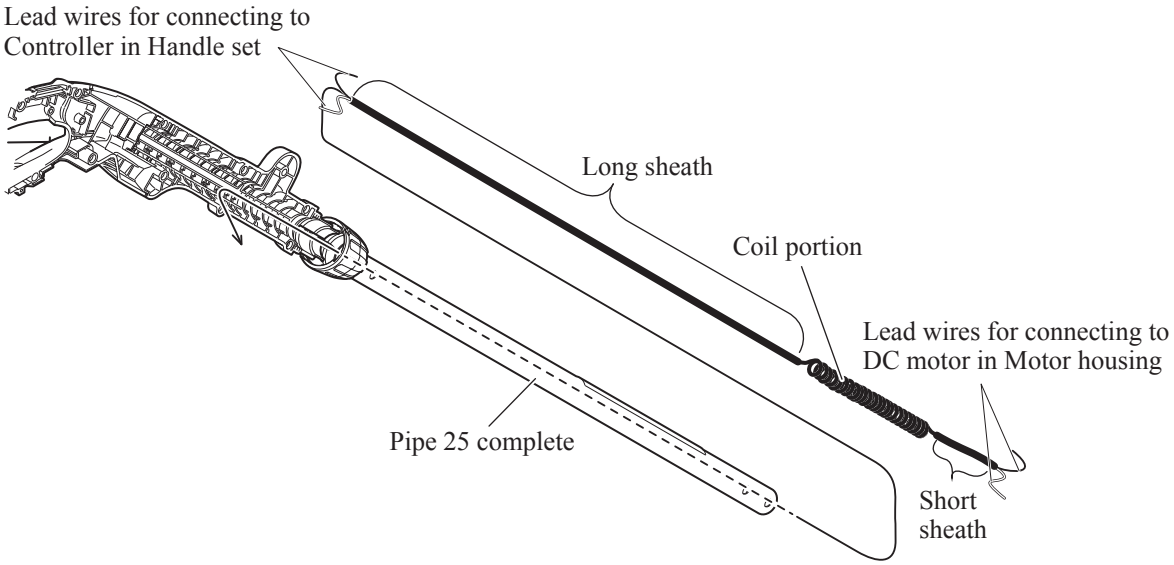
Wiring diagram

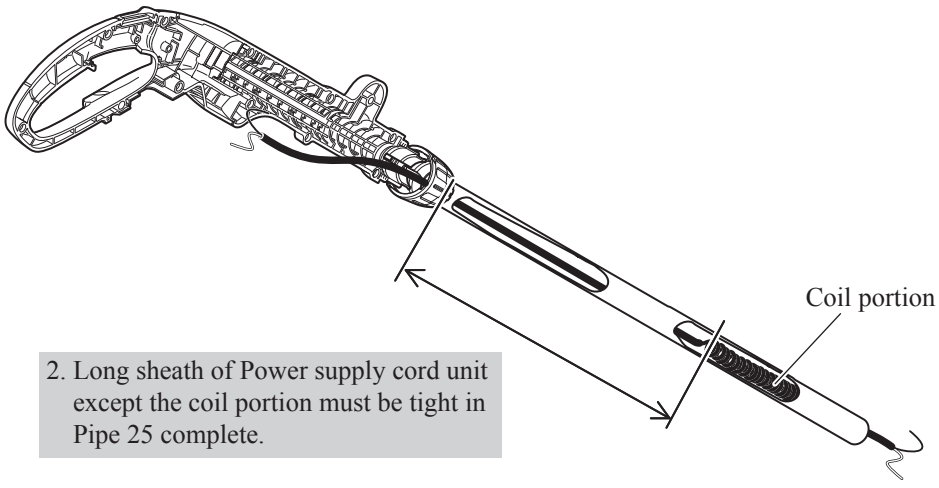
UR140D, UR180, BUR141, BUR181

Fig. D-4

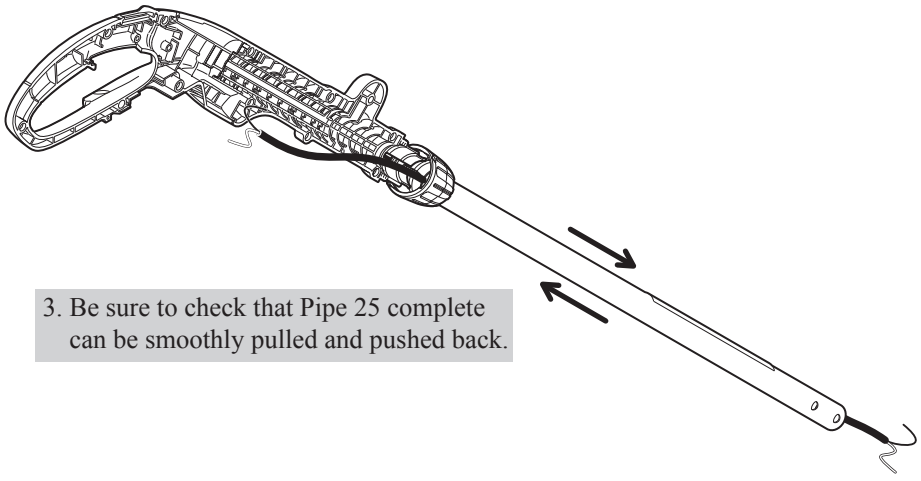
Wiring in Pipe 25

1. Insert the long sheath side into Pipe 25 complete as drawn below.





2. Long sheath of Power supply cord unit except the coil portion must be tight in Pipe 25 complete.



3. Be sure to check that Pipe 25 complete can be smoothly pulled and pushed back.

► Wiring diagram

UR140D, UR180D

Fig. D-5

Wiring to Terminal

While facing the wire connecting portions to Pipe 25 side, connect the Lead wires (black, Yellow) to Terminal. And then, connect Lead wire (red) to Terminal.

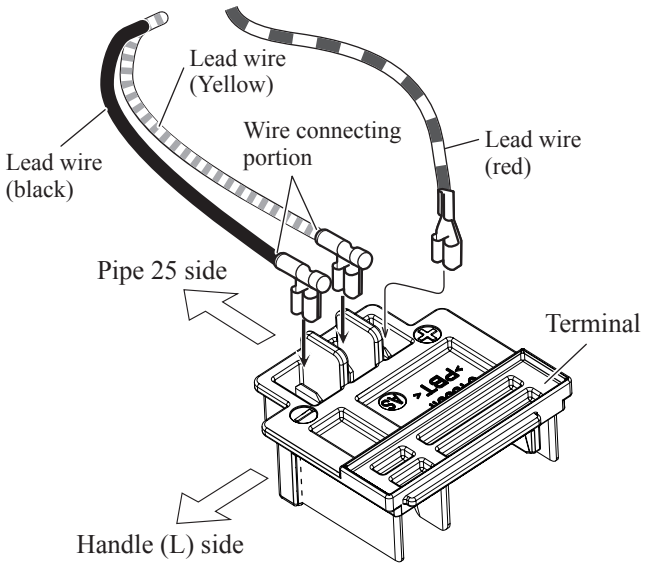
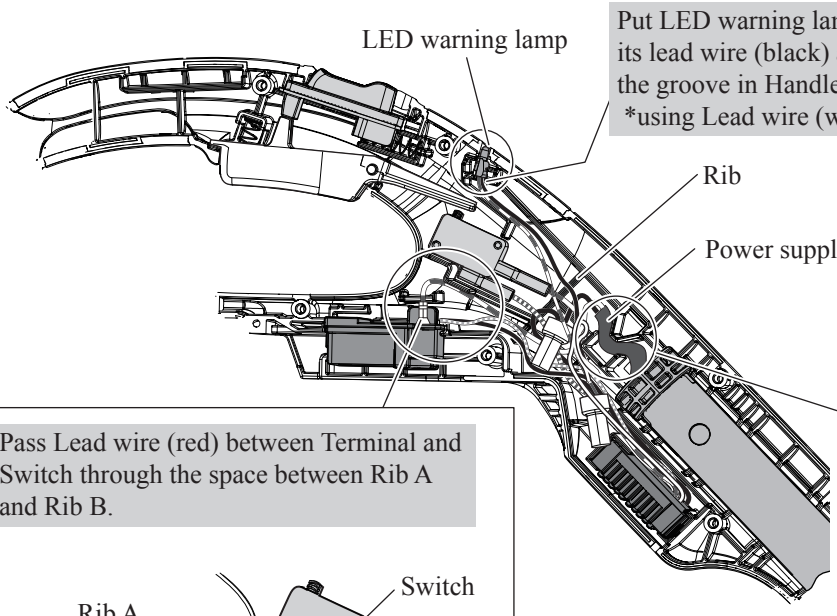


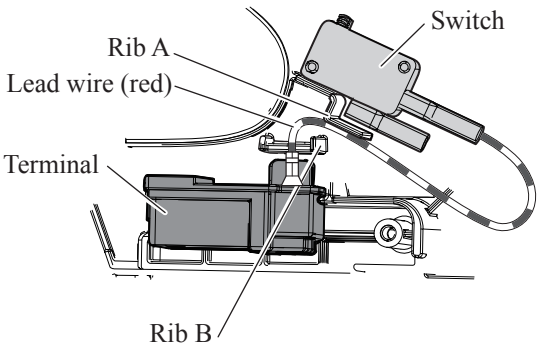
Fig. D-6

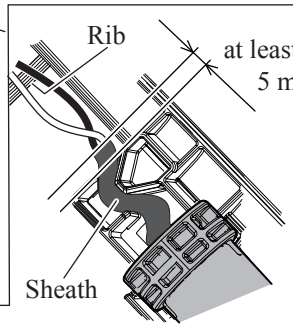
Wiring in Handle (L)



Put LED warning lamp's lead wire (**red**)* on its lead wire (black) and insert them into the groove in Handle (L).
*using Lead wire (white) for some countries

Pass Lead wire (red) between Terminal and Switch through the space between Rib A and Rib B.





1. Come out at least 5 mm long portion of Power supply cord unit from the lower edge of Labyrinth figured lead holders. But the sheath end must not go over Rib A.
2. Make sure that Power supply cord unit is fixed in Labyrinth figured lead holders.

Wiring diagram

UR141D, UR181D

Fig. D-7

Wiring to Terminal

While facing the wire connecting portion to Pipe 25 side, connect the Lead wire (black) to Terminal. And then, connect Lead wires (red, yellow) to Terminal.

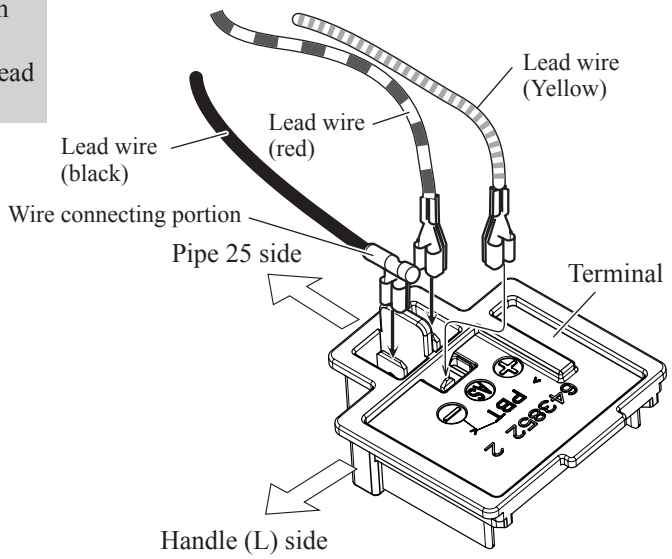
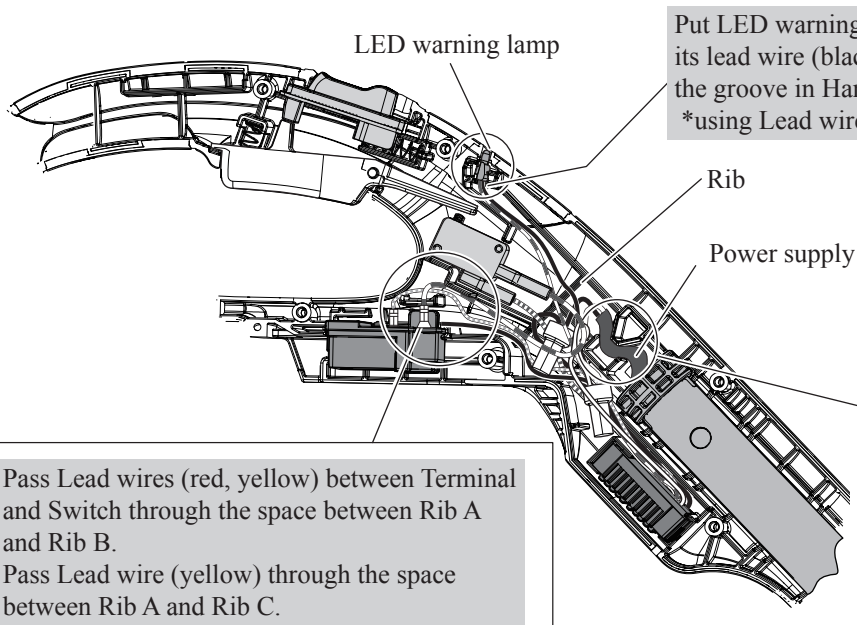


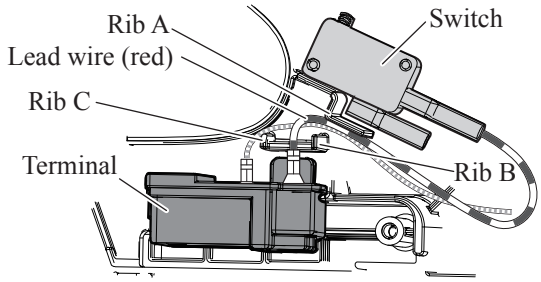
Fig. D-8

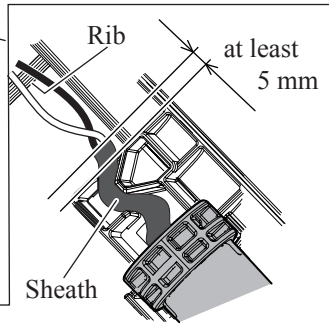
Wiring in Handle (L)



Put LED warning lamp's lead wire (**red**)* on its lead wire (black) and insert them into the groove in Handle (L).
*using Lead wire (white) for some countries

Pass Lead wires (red, yellow) between Terminal and Switch through the space between Rib A and Rib B.
Pass Lead wire (yellow) through the space between Rib A and Rib C.





1. Come out at least 5 mm long portion of Power supply cord unit from the lower edge of Labyrinth figured lead holders. But the sheath end must not go over Rib A.
2. Make sure that Power supply cord unit is fixed in Labyrinth figured lead holders.